The Linear-Connected Waterway System (LCWS)

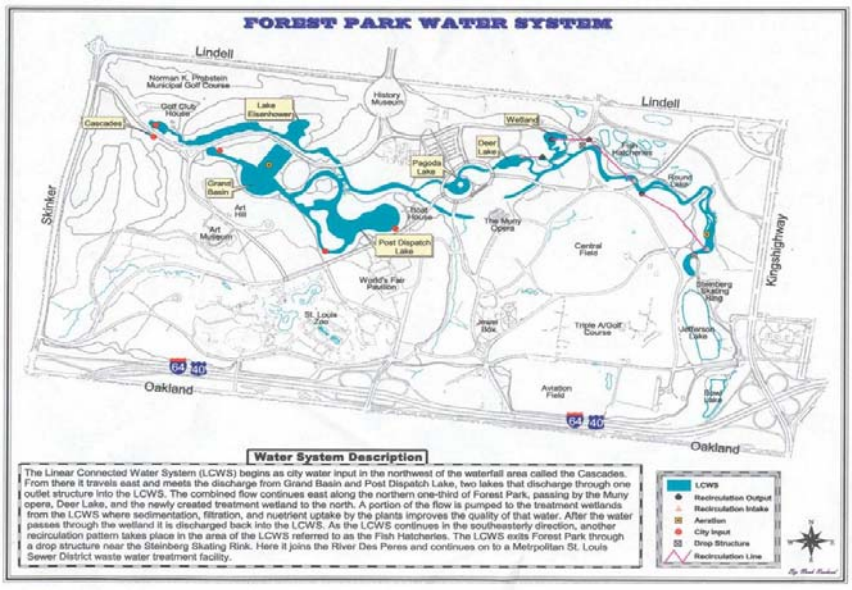
City of St. Louis Parks & Recreation

Location
St. Louis, Missouri

Construction Completion
2004

Construction Cost
$86 million

DMA Services Provided
Civil Engineering
Structural Engineering
Surveying Services
Program Management Services



Forest Park's restored river begins near the Norman K. Probstein Golf Courses. Underwater city water inputs provide 550 gpm to feed the system. Several waterfalls and naturalistic riffles are actually control structures that provide the engineered control required by the system. Riffles and waterfalls also provide extra oxygen to the system, while riparian plantings provide further water quality benefits.

Downstream of the golf courses, the rocky spillways of Post-Dispatch Lake provided an additional 500 gpm to the system. The waterway winds through Langenberg Field where it splits into two branches – one that flows beneath the stage of the Muny Opera and the other that flows around the Bandstand in Pagoda Circle. The renovated Pagoda Circle boasts several new bridges and concrete weirs with sharp drops for visual effect and added waterway quality benefits.

The waterway subsequently flows into Deer Lake and the Deer Lake Wetland area. Deer Lake is accentuated at its downstream end by a series of rocky riffles, constructed from 2,000 tons of Wisconsin "holey stone". This wetland receives flow from both Deer Lake through a gravity feed and the lower LCWS via a re-circulating pump station.

The LCWS was completed in 2004, and the system continues to mature. A Water Quality Management Plan and Water Systems Operations Manual provided guidelines on maintaining good water through customized best management practices and a monitoring program. Wildlife has returned to the system.

David Mason & Associates provided surveying, civil engineering, structural engineering and Program Management services for the design and construction of the river system, control structures, and natural systems.

DAVID MASON & ASSOCIATES